

Abstract

2 A novel method for finding optimized solutions for assigning pins to
probes in a constrained tester environment is presented. Given a test system
4 network, including the nodes, probes, pins, resources, probe-to-resource
mappings, resource-to-pin mappings, and test-to-resource mappings, and
6 constraints including a Multiple-Resource-Per-Probe Constraint, a Same-
Module Constraint, and/or a Multiplexing Constraint, the test system network
8 is modeled as a Network Flow Problem to handle all of the constraints of the
constrained pin-to-probe assignment problem, using “dummy” probes where
10 necessary to model the constrained network. A modified Maximum Flow
Algorithm that satisfies the network constraints is applied to the Network
12 Flow Problem to generate a solution to said constrained pin-to-probe
assignment problem.